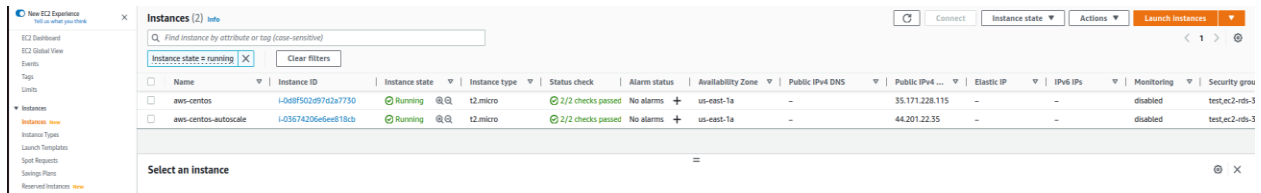


Edureka – AWS Solution Architect Certification Training Course: Project 2

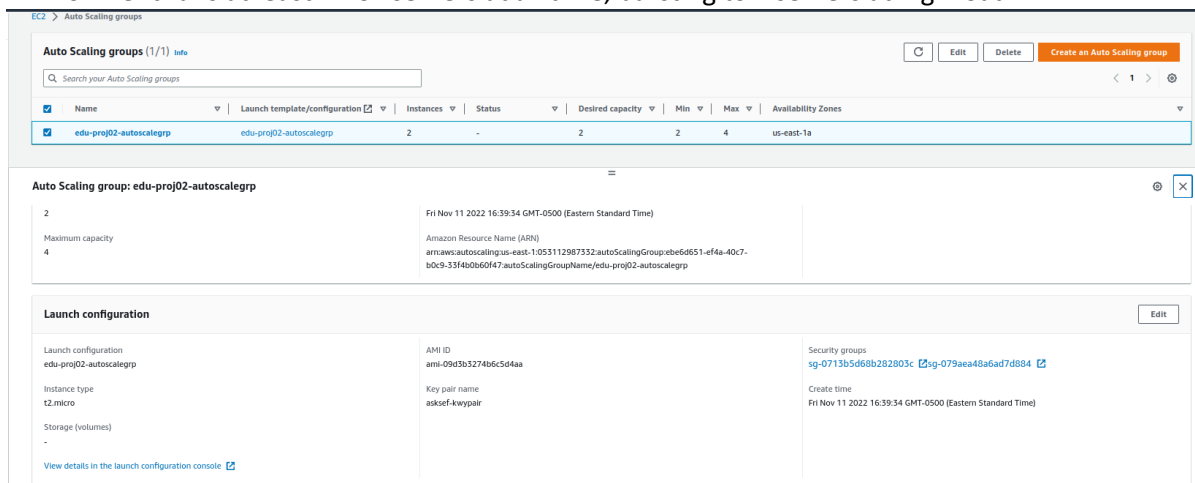
Goal: To architect a solution that is secure, scalable, highly available, and cost effective using AWS.



Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring	Security grou
aws-centos	i-0d8f502d9742a7730	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	35.171.228.115	-	-	disabled	test-ec2-rds-3
aws-centos-autoscale	i-03674206e6ee818cb	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.201.22.35	-	-	disabled	test-ec2-rds-3

1: AWS Linux ami instance for Project 2

- Designed to host a dynamic website, where customers can enter their detail, then stored on a RDS database.
- Environment runs at least 2 EC2 servers at all time, bursting to 4 servers at high load



Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
edu-proj02-autoscalegrp	edu-proj02-autoscalegrp	2	-	2	2	4	us-east-1a

Auto Scaling group: edu-proj02-autoscalegrp

2

Fri Nov 11 2022 16:39:34 GMT-0500 (Eastern Standard Time)

Maximum capacity

4

Amazon Resource Name (ARN)

arn:aws:autoscaling:us-east-1:055112987332:autoScalingGroup:edu-proj02-autoscalegrp

Launch configuration

Launch configuration

edu-proj02-autoscalegrp

AMI ID

ami-09d3b3274b6c5d4aa

Key pair name

asksef-kwypair

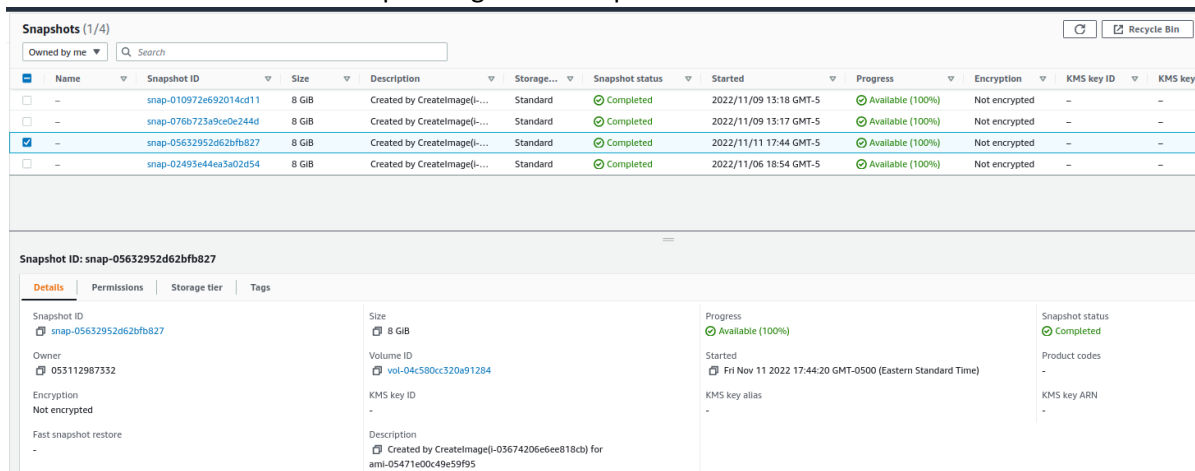
Security groups

sg-0713b5d68b282803c

Create time

Fri Nov 11 2022 16:39:34 GMT-0500 (Eastern Standard Time)

- Provides for PaaS solution with patching and backups



Name	Snapshot ID	Size	Description	Storage...	Snapshot status	Started	Progress	Encryption	KMS key ID	KMS key
-	snap-010972e692014cd11	8 GiB	Created by CreateImage(i-...	Standard	Completed	2022/11/09 13:18 GMT-5	Available (100%)	Not encrypted	-	-
-	snap-076b723a9ce0e244d	8 GiB	Created by CreateImage(i-...	Standard	Completed	2022/11/09 13:17 GMT-5	Available (100%)	Not encrypted	-	-
-	snap-05632952d62bfb827	8 GiB	Created by CreateImage(i-...	Standard	Completed	2022/11/11 17:44 GMT-5	Available (100%)	Not encrypted	-	-
-	snap-02493e44ea5a02d54	8 GiB	Created by CreateImage(i-...	Standard	Completed	2022/11/06 18:54 GMT-5	Available (100%)	Not encrypted	-	-

Snapshot ID: snap-05632952d62bfb827

Details

Permissions

Storage tier

Tags

Snapshot ID

snap-05632952d62bfb827

Owner

055112987332

Encryption

Not encrypted

Fast snapshot restore

-

Size

8 GiB

Volume ID

vol-04c580cc320a91284

KMS key ID

-

Description

Created by CreateImage(i-03674206e6ee818cb) for ami-05471e00c49e59f95

Progress

Available (100%)

Started

Fri Nov 11 2022 17:44:20 GMT-0500 (Eastern Standard Time)

KMS key alias

-

Snapshot status

Completed

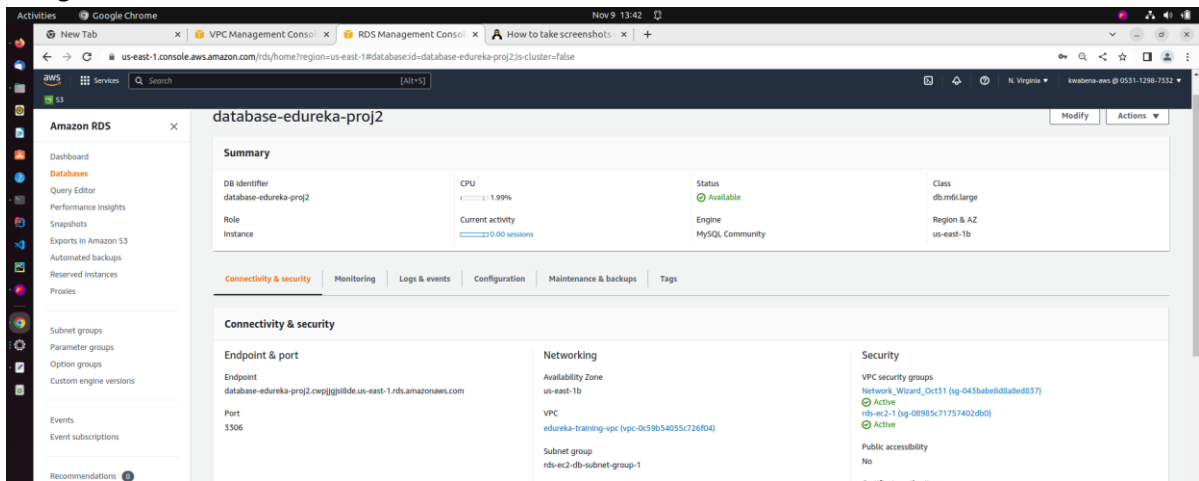
Product codes

-

KMS key ARN

-

- Designed RDS environment



2: Amazon RDS instance for Project 2

database-edureka-proj2-snapshot

Details	
ARN	arn:aws:rds:us-east-1:053112987332:snapshot:database-edureka-proj2-snapshot
Instance/Cluster Name	database-edureka-proj2
Master username	admin
DB snapshot name	database-edureka-proj2-snapshot
Snapshot type	manual
DB engine	mysql
DB engine version	8.0.28
License model	general-public-license
Option group	default:mysql-8-0
Snapshot Creation Time	Not yet available
Instance/Cluster Creation	October 31, 2022, 13:28 (UTC-04:00)
VPC	vpc-0c59b54055c726f04
Status	Creating
Storage type	Provisioned IOPS SSD (io1)
DB storage	400 GiB
IOPS	3000
Storage throughput	0
Port	3306

- Website for customer details

AWS Project II

A dynamic website where the customers can enter their details, which should be stored in a database.

Name

Address

ADD DATA

Customer Details		
ID	Name	Address
1	kwame	Accra, Ghana
2	kwame	Accra, Ghana

- Database contents

phpMyAdmin interface showing the 'Employees' table in the 'eduprojdb' database. The table has 2 rows with columns ID, Name, and Address. The first row is (1, 'kwame', 'Accra, Ghana') and the second is (2, 'kwame', 'Accra, Ghana').

phpMyAdmin interface showing the 'customer' table in the 'eduprojdb' database. The table has 3 rows with columns id, name, and address. The first row is (1, 'Solomon A S', 'Toronto, Ontario'), the second is (2, 'Kwabena AS', 'Etobicoke, Ontario'), and the third is (3, 'Paarth Manpreet', 'Etobicoke, Ontario').

```
[ec2-user@ip-172-31-21-86 html]$ mysql -h database-1.cwpjgjsi8de.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 213
Server version: 8.0.28 Source distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]> select * from customer;
ERROR 1046 (3D000): No database selected
MySQL [(none)]> select * from eduprojdb.customer;
+-----+-----+-----+
| id | name | address |
+-----+-----+-----+
| 1 | Solomon A S | Toronto, Ontario |
| 2 | Kwabena AS | Etobicoke, Ontario |
| 3 | Paarth Manpreet | Etobicoke, Ontario |
+-----+-----+-----+
3 rows in set (0.00 sec)

MySQL [(none)]>
```

- EC2 instance definition with auto-scaling, monitoring

Successfully stopped i-004b5a45338cb3018

Instances (1/2)

Find instance by attribute or tag (case-sensitive)

aws-centos

Clear filters

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring	Security gro
<input type="checkbox"/>	aws-centos	i-0a8f502d97d2a7730	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	35.171.228.115	-	-	disabled	test,ec2-rds-
<input checked="" type="checkbox"/>	aws-centos-autoscale	i-03674206e6ee818cb	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.201.22.35	-	-	disabled	test,ec2-rds-

Instance: i-03674206e6ee818cb

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ Instance summary

Instance ID

i-03674206e6ee818cb

IPv6 address

-

Hostname type

IP name: ip-172-31-18-243.ec2.internal

Answer private resource DNS name

-

Auto-assigned IP address

44.201.22.35 [Public IP]

IAM Role

-

▼ Instance details

Platform

Amazon Linux (Inferred)

Platform details

Linux/UNIX

Stop protection

Disabled

Public IPv4 address

44.201.22.35 [open address]

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-18-243.ec2.internal

Instance type

t2.micro

VPC ID

vpc-0a0c53db6e9eb6538 (test)

Subnet ID

subnet-05822777d0430e868 (test)

Private IPv4 addresses

172.31.18.243

Public IPv4 DNS

-

Elastic IP addresses

-

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name

edu-proj02-autoscalegrp

AMI ID

ami-09d3b3274b6c5d4aa

AMI name

amzn2-ami-kernel-5.10-hvm-2.0.20221004.0-x86_64-gp2

Launch time

Fri Nov 11 2022 16:43:19 GMT-0500 (Eastern Standard Time) (6 minutes)

Monitoring

disabled

Termination protection

Disabled

AMI location

amazon/amzn2-ami-kernel-5.10-hvm-2.0.20221004.0-x86_64-gp2

Instance: i-03674206e6ee818cb

Usage operation

RunInstances

ClassicLink

Allow tags in instance metadata

Disabled

▼ Host and placement group

Host ID

-

Host resource group name

-

Virtualization type

hvm

Number of vCPUs

1

▼ Capacity reservation

Capacity Reservation ID

-

▼ Accelerators

Elastic Graphics ID

-

Affinity

-

Tenancy

default

Reservation

r-030bf6aaab0111542

Capacity Reservation setting

open

Elastic inference accelerator ID

-

Owner

053112987332

Boot mode

-

Answer RBN DNS hostname IPv4

Disabled

Placement group

-

Placement group ID

-

Partition number

-

EC2 > Auto Scaling groups

Auto Scaling groups (1/1)

Search your Auto Scaling groups

Create on Auto Scaling group

<input checked="" type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input checked="" type="checkbox"/>	edu-proj02-autoscalegrp	edu-proj02-autoscalegrp	2	-	2	2	4	us-east-1a

Auto Scaling group: edu-proj02-autoscalegrp

Details | Activity | Automatic scaling | Instance management | Monitoring | Instance refresh

Group details

Desired capacity

2

Minimum capacity

2

Maximum capacity

4

Auto Scaling group name

edu-proj02-autoscalegrp

Date created

Fri Nov 11 2022 16:39:34 GMT-0500 (Eastern Standard Time)

Amazon Resource Name (ARN)

arn:aws:autoscaling:us-east-1:053112987332:autoScalingGroup:ebd6d51-e4fa-40c7-b0c3-33f4b0b6f47:autoScalingGroupName/edu-proj02-autoscalegrp

Launch configuration

Launch configuration

edu-proj02-autoscalegrp

Instance type

Kury pair name

AMI ID

ami-09d3b3274b6c5d4aa

Security groups

sg-0713b5d68b282803c sg-073aea48a6ad7d884

Create time

Auto Scaling groups (1/1) Info

Search your Auto Scaling groups

<input checked="" type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input checked="" type="checkbox"/>	edu-proj02-autoscalegrp	edu-proj02-autoscalegrp	2	Updating capacity	0	0	0	us-east-1a

Auto Scaling group: edu-proj02-autoscalegrp

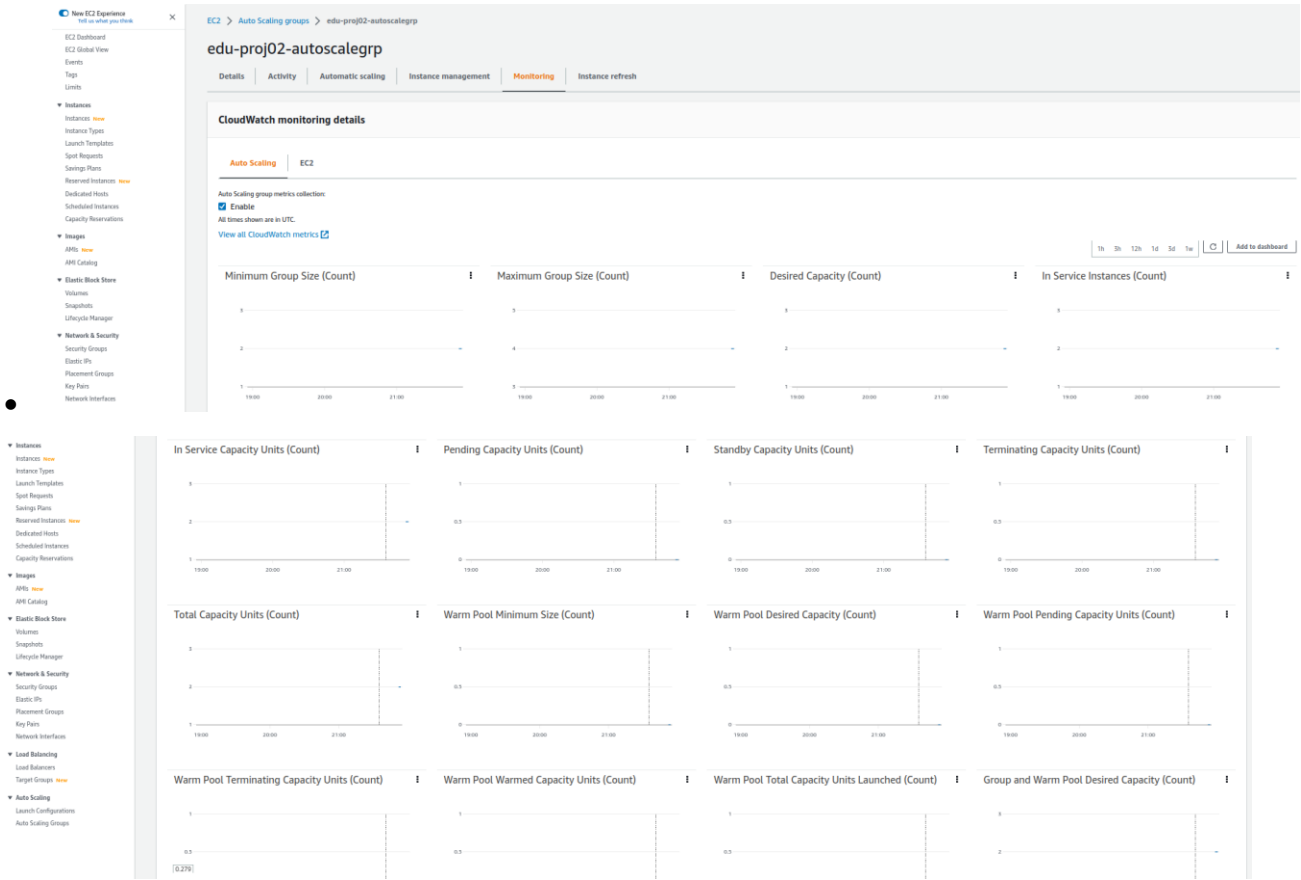
Details | Activity | Automatic scaling | Instance management | Monitoring | Instance refresh

Instances (2)

Filter instances

<input type="checkbox"/>	Instance ID	Lifecycle	Instance type	Weighted capacity	Launch template/configur...	Availability Zone	Health status
<input type="checkbox"/>	i-03674206e6ee818cb	Terminating	t2.micro	-	edu-proj02-autoscalegrp	us-east-1a	Healthy
<input type="checkbox"/>	i-08c3d0975f7b791cf	Terminating	t2.micro	-	edu-proj02-autoscalegrp	us-east-1a	Healthy

Monitoring



The cluster was created successfully.

ElastiCache > Memcached clusters

Memcached clusters (1) Info

Find Memcached clusters

Cluster name

Zone

Node type

Engine version

Nodes

Created date

Status

elasticache	-	cache.r6g.large	1.6.12	0	-	Creating
-------------	---	-----------------	--------	---	---	----------

Backup:

New EC2 Experience

EC2 Dashboard

EC2 Global View

Events

Tags

Security

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Currently creating AMI **ami-0c2711c0a5b0a3070** from instance **i-03674206e6e818cb**. Check that the AMI status is 'Available' before deleting the instance or carrying out other actions related to this AMI.

Connect

Instance state

Actions

Launch instances

Find instance by attribute or tag (case-sensitive)

aws-centos

Clear filters

Instances (2)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitoring	Security gro
<input type="checkbox"/>	aws-centos	i-068f502e9742a77350	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	35.171.228.115	-	-	disabled	test_ec2-ops-3
<input type="checkbox"/>	aws-centos-autoscale	i-05674206e6e818cb	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.201.22.35	-	-	disabled	test_ec2-ops-3

Select an instance

- Others – disaster recovery

Instances (1/2) [info](#)

Instance state = running

Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	ET	Actions	IPs	Monitoring	Security gr
<input checked="" type="checkbox"/>	aws-centos	i-0d8f502d97d2a7730	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	35.171.228.115	-	<div>Stop instance Start instance Reboot instance Hibernate instance Terminate instance</div>	-	disabled	test,ec2-rd
<input type="checkbox"/>	aws-centos-autoscale	i-03674206e6ee818cb	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	44.201.22.35	-	-	-	disabled	test,ec2-rd
<input type="checkbox"/>	aws-centos	i-0d8f502d97d2a7730	Terminated	t2.micro	-	No alarms +	us-east-1a	-	-	-	-	-	disabled	-
<input type="checkbox"/>	aws-centos-autoscale	i-03674206e6ee818cb	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	44.201.22.35	-	-	-	disabled	test,ec2
<input type="checkbox"/>	-	i-08c3d0975f7b791cf	Running	t2.micro	Initializing	No alarms +	us-east-1a	-	44.202.76.114	-	-	-	disabled	test,ec2

EC2 > Auto Scaling groups > edu-proj02-autoscalegrp

edu-proj02-autoscalegrp

Details

Activity

Automatic scaling

Instance management

Monitoring

Instance refresh

Activity notifications (0)

Send to

On instance action

No notifications are currently specified

Create notification

Activity history (4)

Status	Description	Cause	Start time	End time
Successful	Launching a new EC2 instance: i-08c3d0975f7b791cf	At 2022-11-12T20:10:26Z an instance was launched in response to an unhealthy instance needing to be replaced.	2022 November 12, 03:10:28 PM -05:00	2022 November 12, 03:11:00 PM -05:00
Successful	Terminating EC2 instance: i-0d8f502d97d2a7730	At 2022-11-12T20:10:26Z an instance was taken out of service in response to an EC2 health check indicating it has been terminated or stopped.	2022 November 12, 03:10:26 PM -05:00	2022 November 12, 03:10:48 PM -05:00
Successful	Launching a new EC2 instance: i-03674206e6ee818cb	At 2022-11-11T21:43:04Z a user request update of AutoScalingGroup constraints to min: 2, max: 4, desired: 2 changing the desired capacity from 1 to 2. At 2022-11-11T21:43:17Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 2.	2022 November 11, 04:43:19 PM -05:00	2022 November 11, 04:44:22 PM -05:00
Successful	Attaching an existing EC2 instance: i-0d8f502d97d2a7730	At 2022-11-11T21:39:35Z an instance was added in response to user request. Keeping the capacity at the new 1.	2022 November 11, 04:39:35 PM -05:00	2022 November 11, 04:39:39 PM -05:00

edu-proj02-autoscalegrp

Details

Activity

Automatic scaling

Instance management

Monitoring

Instance refresh

Instances (2)

	Instance ID	Lifecycle	Instance type	Weighted capacity	Launch template/configur...	Availability Zone	Health status	Protected from
<input type="checkbox"/>	i-03674206e6ee818cb	InService	t2.micro	-	edu-proj02-autoscalegrp	us-east-1a	Healthy	-
<input type="checkbox"/>	i-08c3d0975f7b791cf	InService	t2.micro	-	edu-proj02-autoscalegrp	us-east-1a	Healthy	-

<input type="checkbox"/>	aws-centos	i-0d8f502d97d2a7730	Terminated	t2.micro	-	No alarms +	us-east-1a	-	-	-	disabled	-	
<input type="checkbox"/>	aws-centos-autoscale	i-03674206e6ee818cb	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	44.201.22.35	-	-	disabled	test,ec2-rds:1
<input type="checkbox"/>	-	i-08c3d0975f7b791cf	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	44.202.76.114	-	-	disabled	test,ec2-rds:1